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Spaceport News

America's gateway to the universe. Leading the world in preparing and launching missions to Earth and beyond.

John F. Kennedy Space Center

KSC Calendar

Celebrating Earth

See page 5 for activities marking Environmental and Energy Awareness Week April 20 – 24.

1st Annual Childcare Professionals Day

The first Annual Child Care Professionals Day will be held April 24. See page 5 for details.

All-American Picnic

A number of new events are planned for this year's KSC All-American Picnic on May 16. See page 6 for information and contacts.

Daughters Day

Take Our Daughters to Work Day will be held April 23. See page 6 for details.

Hire proud of connection to Florida

First astronaut from KSC describes training

By Joel Wells

The next time she climbs aboard a ship in Florida it won't be for a sailboat race. Home-grown KSC astronaut and sailing enthusiast, Kay Hire, is trained and ready to set sail on a 16-day mission aboard the spaceship Columbia on April 16.

Hire recently returned to KSC from Houston to take part in the STS-90 Terminal Countdown Demonstration Test. While she was here, driving along local roads reminded her of home. "I miss my friends here in Florida," said Hire. "The weather here and the smell of citrus blossoms bring back a lot of fond memories."

Hire reported to Johnson Space Center in March 1995 after being selected as an astronaut in December 1994. She is the first KSC worker to become an astronaut. The astronaut selection was only one in a series of firsts that highlight Hire's professional career. As a Naval Air Reserve patrol plane navigator/ communicator, she was the first American female assigned to a combat crew in 1993. Her hands-on experience with Shuttle flight hardware makes her the first astronaut to have worked on an orbiter prior to flight and her mission

(See HIRE, Page 2)

ROOKIE space flyer Kay Hire suits up for Terminal Countdown Demonstration Test (TCDT) activities on March 31. Hire began working at KSC in 1989 and is the first person from Kennedy to be selected to join the astronaut program.

Columbia to lift off April 16

A complex mission focusing on the most complex system in the human body will highlight the final scheduled Spacelab flight aboard the Space Shuttle this month.

Preparations continue toward the liftoff of the Shuttle Columbia at 2:16 p.m. EDT, April 16, from Launch Pad 39B.

The human nervous system is the most complex and least understood part of the body. During the 16-day mission, a crew of seven will perform studies both on themselves and a menagerie of animals including snails, two kinds of fish, rats and crickets.

Among the questions the 26 planned studies will address are:

• Does spaceflight change the way blood pressure and brain blood flow are regulated?

• Can the quality and quantity of sleep in space be improved?

• Has nervous control of circulation been altered by exposure to microgravity?

The investigations build on data collected during earlier Spacelab life science missions. For example, while all the crew members could easily stand quietly for 10 mintues prior to flight, after returning

(See STS-90, Page 8)

New safety education initiative takes DuPont concept one step further

A core group in the Safety and Mission Assurance Directorate is taking the first steps toward effecting a cultural change in how KSC civil servants deal with the issue of safety.

Regarding their role as that of educators rather than traditional trainers, the eight-member team seeks to take the world-recognized DuPont safety philosophy and translate it into something the

(See SAFETY, Page 7)

SAFETY instructor Rick Sweet (right) conducts a walkdown at the Banana Creek Viewing Site with Lisa Fowler, Public Affairs; Dave Barker (left), a member of the University of Safety and Mission Assurance core group; and Acting Director of Public Affairs David Dickinson (center). Fowler said she found the training to be valuable.

Hire ...

(Continued from Page 1)

commander, Richard Searfoss, recently called it invaluable experience.

At JSC, she first completed one year of mission specialist training and evaluation. Hire then served in Mission Control as space craft communicator (CAPCOM) on nine Shuttle missions before starting full time preparation for her upcoming Neurolab mission. As Mission Specialist No. 2, she will help maintain the Shuttle systems that provide a work platform for the onboard experiments.

"Watching a launch as CAPCOM for the first time and on TV from a distance, felt strange," said Hire who supported more than 40 launches as a KSC employee. She began in May 1989 as an EG&G activation engineer in Orbiter Processing Facility Bay 3. She later became an orbiter mechanical systems engineer for Lockheed Space Operations Co. and certified as a Shuttle test project engineer (TPE) in 1991. From the TPE console in the KSC firing room, she integrated the technical aspects of Shuttle turnaround maintenance from landing through launch.

"She's a very likable person and good spirited," recalls her former coworker Kristine Wilson, KSC test project engineer. "Seeing the astronauts really brings it home that we're working for real people and knowing Kay really personalizes our efforts. We just look forward to getting with her after the flight and hearing what it was like."

Hire will carry a few mementos into space to remind her of home and to honor those that will help her get there. Stowed away in her personal gear will be a photo for her former coworkers and a banner from Florida Technical Institute. Hire earned a master of science degree in space technology from F.I.T. in 1991.

Visibly excited about her upcoming adventure and emphasizing her complete trust in KSC's Shuttle team, Hire says the greatest challenge she expects to face will be working in weightlessness. "We've practiced all of these procedures and experiments here on the ground, but when we do them in space we'll be floating away and the equipment will be floating away. You have to think through the simplest task."

As a former KSC launch team member Hire is no stranger to challenges, and the KSC team has done its part to ensure that the entire STS-90 crew will not be strangers to success.

Astronaut time on Mir passes two-year mark

U.S. astronauts have accumulated more than two years aboard the Russian Space Station Mir, beginning with the stay of Shannon Lucid on March 24, 1996, and continuing today with Andy Thomas as the final U.S. crew member to complete an extended stay aboard the station.

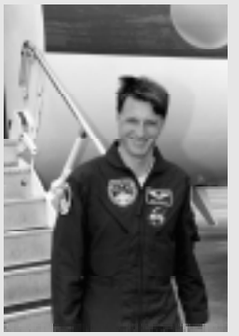
Thomas and fellow crew members, Commander Talgat Musabayev and Flight Engineer Nikolai Budarin, recently welcomed a Progress supply vehicle, and reported to Mission Control that they could smell fresh apples as soon as they opened the hatch. The two cosmonauts have begun a series of space walks to make repairs to station elements damaged during last year's collision, as well as to perform routine maintenance.

The six astronauts who have completed successive stays on Mir are:

1). Shannon Lucid
Length of stay: 179 days
Launch: March 22, 1996, STS-76
Transfer to Mir: March 24,1996
Transfer to Shuttle: Sept. 19, 1996, STS-79
Landing: Sept. 26, 1996

2). John Blaha
Length of stay: 118 days
Launch: Sept. 16, 1996, STS-79
To Mir: Sept. 19, 1996, 1996
From Mir: Jan. 15, 1997, STS-81
Landing: Jan. 22, 1997

3). Jerry Linenger
Length of stay: 123 days
Launch: Jan. 12, 1997, STS-81
To Mir: Jan. 15, 1997
From Mir: May 17, 1997, STS-84
Landing: May 24, 1997



4). Michael Foale
Length of stay: 134 days
Launch: May 15, 1997, STS-84
To Mir: May 17, 1997
From Mir: Sept. 28, 1997, STS-86
Landing: Oct. 6, 1997

5). David Wolf
Length of stay: 119 days
Launch: Sept. 25, 1997, STS-86
To Mir: Sept. 28, 1997
From Mir: Jan. 25, 1998, STS-89
Landing: Jan. 31, 1998

6). Andy Thomas
Length of stay: Ongoing
Launch: Jan. 22, 1998, STS-89
To Mir: Jan. 25, 1998

JFK Jr. attends HBO premiere

JOHN F. Kennedy Jr., seen here with KSC Director Roy Bridges Jr., was one of the many luminaries who attended the March 25 premiere showing of Home Box Office's space extravaganza, *From the Earth to the Moon,* at the Apollo Saturn V Center. Noteworthy trivia about the 12-part, $65-million production: More than 100 locations were used, including KSC and Edwards Air Force Base, Calif.; the moonscape set required 3,500 tons of Earth for the foundation and 2,000 tons of crushed granite to simulate the gray of the lunar surface; to simulate the moon's reduced gravity, actors were rigged to large 10-foot by 60-foot helium balloons, which has never been done before.

STS-90 rollout

Editor's Note: There are not many workplaces where an employee reporting for duty Monday morning is greeted by a sight as wondrous as that of a Space Shuttle rolling out to the launch pad. Perhaps it was the clear air, but the rollout of the Space Shuttle Columbia to Launch Pad 39B on March 23 was particularly beautiful, reminding those fortunate enough to see it that the Shuttle is not only a robust and efficient launch system, but also a very photogenic one. These photos taken by Bionetics Corp. photographer George Shelton demonstrate that no matter how many times we witness a rollout, there is always something new and inspiring about it. Above left, Columbia begins the journey from the Vehicle Assembly Building at 7:30 a.m. Top photo above, lucky visitors to the Launch Complex 39 tour destination take advantage of the closeup view of Columbia passing by atop the Mobile Launcher Platform and Crawler-Transporter. Above photo, the crawler makes the turn toward Launch Pad 39B. Photo at left, the climb up the five-degree incline to the top of the pad. At right, destination achieved.

Three senior KSC managers wrapped up their NASA careers April 3

Jimmy J. Akin


Jimmy Akin

Chief Information Officer Jimmy J. Akin wrapped up his KSC career April 3 with plans to begin a new professional life in private industry.

Akin is originally from Georgia and earned a bachelor's degree in mathematics from State University of West Georgia. He began working at KSC in January 1967 for Federal Electric Corp. His initial assignment involved reduction of real-time data in support of the Apollo program.

Akin joined the NASA side of the house in June 1968. In the 1970s, he was involved with the expendable launch vehicle program on the Cape, again in the area of real-time programming assignments supporting unmanned vehicles. He moved back across the river in the early 1980s to assume steadily increasing responsibilities in the Computer Services Division.

Akin said one of the greatest challenges he encountered was the development of STARS, the Space Transportation Accounting and Resources System, an online financial management system still being used at KSC today. The project involved multiple contractors and multiple NASA organizations as well as incorporating technology relatively new for the time, making it a very complex assignment.

Akin said the Apollo 11 lunar landing and the Challenger accident represented the two most momentous events that occurred during his tenure.

In his new life, he will be based out of his home, working for a Rockville, Md.-based company. "I expect to do a lot of traveling initially," he said, "and will then work from home as a telecommuter."

Akin and his wife, June, will continue to reside in Titusville.

J. Albert Diggs Jr.


Jay Diggs

One phase of a lifetime dedicated to equal opportunity for all ended April 3 as KSC Equal Opportunity Program Office Director J. Albert "Jay" Diggs Jr. retired after 25 years with NASA.

Originally from Alabama, Diggs earned a bachelors degree in Spanish and English from Southern University and later a master's degree in human relations from the University of Oklahoma.

After moving to Florida, he initially worked as a teacher in Melbourne. He later served as executive director of the Brevard County Community Action Agency prior to joining federal service as a field representative with the regional office of the U.S. Office of Economic Opportunity in Atlanta.

Diggs joined NASA in 1973 as an equal opportunity specialist, becoming the head of the Equal Opportunity Program Office at KSC in 1980.

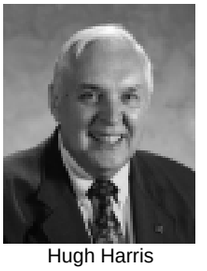
Diggs said that the task of making the equal opportunity program an accepted part of the KSC infrastructure was both the most challenging and rewarding aspect of his career.

"I've seen it evolve into a partnership within management, and it's now part of the infrastructure," he observed. "Getting it there wasn't easy."

A strong advocate and practitioner of volunteerism and community service, Diggs plans to continue work in a number of community and professional organizations, including the KSC Federal Credit Union. He also is entering into a partnership for a minority-owned charter bus company and plans to return to KSC as a Public Affairs volunteer.

Diggs and his wife, Barbara, live in Titusville.

Hugh W. Harris


Hugh Harris

NASA KSC Public Affairs Director Hugh W. Harris retired April 3, completing 35 years of federal service.

A native of Cleveland, Ohio, Harris earned a bachelor's degree in speech and dramatic arts from Western Reserve University after serving in the U.S. Army. After a year in graduate school at Columbia University, Harris worked as a radio newscaster, a reporter for a metropolitan daily and a magazine writer for a major energy company before joining NASA in 1963. His first position with NASA was as an information specialist at Lewis Research Center in Cleveland.

He originally planned to work in the space program for a limited period before returning to a career in journalism. But, "everyone I worked with at Lewis felt that what we were doing was important work," Harris said. "I grew to believe that it was the defining effort of this century for our country and world, so I stayed."

Harris transferred to KSC in 1975, managing the KSC News Center. He also provided broadcast commentary for approximately 100 manned and expendable space vehicle launches, including the first Space Shuttle launch in 1981 and the return to flight launch in 1988. He was named deputy director of Public Affairs in 1986 and director in May 1992, and was appointed to the Senior Executive Service the same year.

Harris, who resides in Cocoa Beach with his wife, Cora, plans to complete the remodeling of his home as the first order of business in his retirement life. He also is interested in writing a book focusing on the satisfaction of being part of KSC. Its working title: *Why I like to Work at Kennedy Space Center.*

Early Out opportunity extended until Sept. 30

NASA KSC civil servants will have until Sept. 30 to take advantage of the Early Out authority originally scheduled to end March 31. The Early Out is open to civil servants at least 50 years of age with 20 years of federal service, or any age with 25 years of service.

The latest wave of civil service departures lowers the size of the permanent NASA workforce at KSC to between 1,800 and 1,900 people, a figure similar to the early 1960s when activities for the Apollo program were still ramping up. Although official records are difficult to come by, peak civil service employment at KSC appears to have been in the late 1960s, when the federal workforce was around 3,000 employees.

International Space Station

Amazing fact

The International Space Station, encompassing an area nearly the size of two football fields, will be visible to the naked eye as it passes overhead on-orbit. Its mass of nearly one million pounds is five times the mass of the first space station, Skylab.

— Boeing fact sheet.

ALL SMILES — Press Site Logistics Manager Diana Boles (left) is presented with her certificate of retirement by KSC Public Affairs Director Hugh Harris (right) on April 2 at the KSC News Center. Both Boles and Harris retired April 3. Looking on behind them is Bill Johnson, acting Chief, Public Affairs Media Services Branch.

38 more NASA workers depart KSC

Editor's Note: An additional 38 NASA workers (including the three listed on the page opposite) either retired or resigned from federal service by April 3 under this fiscal year's buyout opportunity. Thirteen individuals were given extensions and will depart the agency Sept. 30:

Resignations:

Thomas E. Beever, PK-E1
Helen D. Busick, MM-G1
J. B. Davis, PK-H7
Linda T. Hannett, BC-C
Anne C. Jamison, HM-A-3
Joanne M. Maceo, BC
Kenneth S. Monroe, BD-B1
Wallace R. Schroeder, MK-S10
Beverly A. Sudermann, BF-A2
Carl O. Wallace, BD-D3

Retirements:

Robert A. Armstrong Jr., FF-S3
Michael W. Bishop, FF-S2
Joyce A. Bodor, PH-B3
A. Diana Boles, AB-F1
Mary Susan Carpenter, BL-C
Calleen R. Coiner, JJ
Joan M. Fosdick, GG-B

Retirements, continued:

Jan C. Foster, AB-F2
Nancy G. Huddleston, MM-J
A. Brooks Humphrys, FF-D2
Jeffery W. Kage, EY-B-2
Bruce W. Laubenheimer, FF-I1
Richard N. Martucci, BC-B
Carole M. McKinley, ST-A
Bascom W. Murrah III, AA-D
John J. Radziwon Jr., EI-F
Gary L. Rhoden, FF-I2
Annette L. Riley, GG-C
Nora S. Ross, PZ
Marshall M. Scott Jr., MM-J1
Stephen Sopko II, EY-B
Sharon J. Sowash, PZ-A3
Thomas H. Swanson, EC-B
Gerald L. Talley Jr., PZ-C2
Myrtle K. Wilcox, LO-SOD-1

Child Care Professionals Day is April 24

April 24 marks the first annual Child Care Professionals' Day, established by an act of Congress.

To celebrate, Child Care Aware (CCA) — an organization that helps parents find quality care — and two corporate sponsors have announced the *Child Care Professionals of the Year* contest. Five winners will be honored in the fall.

Parents can nominate a favorite caregiver by calling CCA at tel. 1-800-424-2246. The organization also has a Web site, http://childcarerr.org that provides information about obtaining quality child care. "Child-care workers are better educated than the general working population but earn less than bus drivers, garbage collectors, and bartenders," said Denise Fogarty, CCA program director. "They don't get the respect they deserve."

At the KSC Child Development Center, a luncheon hosted by the KSC Exchange Council will be held to honor the 28 caregivers responsible for 138 children ages 6 weeks to 5 years.

Environmental events planned in April at KSC and throughout county

A variety of events focusing on the environment are planned for the month of April both on-center and throughout Brevard County:

• **Environmental and Energy Awareness Week celebration:** In support of KSC's Environmental and Energy Awareness Week April 20–24, a wide range of private sector vendors as well as NASA/KSC personnel will display environmental and energy-related exhibits at the KSC Visitor Complex on April 20–21, from 9 a.m. to 3 p.m. Buses will depart from Headquarters every half hour to bring employees to and from the Visitor Complex. These exhibits also will be displayed in the lobbies of the following facilities on April 22–24, from 9 a.m. to 3 p.m.: Headquarters, Space Station Processing Facility, Operations Support Building and the Launch Control Center.

• **Environmental health packets:** Area medical clinics have packets covering the following topics: foodborne illness, visual display terminals and Material Safety Data Sheets (MSDSs).

• **Keep Brevard Beautiful's Trash Bash '98:** The Great Florida Cleanup is scheduled for Saturday, April 25, from 8 a.m. to 11 a.m. Brevard is joining up with Indian River and Volusia counties this year to remove litter from approximately 135 miles of beaches and a combined land mass of 2,950 square miles.

To promote friendly competition among cities, county commissioners' districts and individuals, prizes and incentives will be awarded. Harris Sanitation, Melbourne, is donating a cash award of $1,000 ($500 to go to the city's charity and $500 to the top commissioner's charity). The stained glass "Pelly" (Keep Brevard Beautiful's pelican mascot) will also be awarded to the commissioner whose district has the largest increase in volunteers.

When registering at one of the 27 check-in sites throughout the county, participants will receive (while supplies last) a magnetic memo pad or a foghorn for boaters. Drawings for a cooler will be conducted at each check-in location as well. T-shirts will be available for a $10-donation or may be obtained in advance for an $8-donation. This year's design was created by an Eau Gallie High School student.

Participants are urged to bring gloves, hats, sunscreen, water, bug spray, and closed shoes or wading boots.

For more information on the clean-up and the check-in sites, contact Keep Brevard Beautiful at 639-0666.

THIS image showing the southern tip of Florida was taken during the STS 51-C mission in 1985. The Everglades are to the center and right, with Lake Okeechobee at lower left. Photos of the Earth taken from the Space Shuttle are archived on the Johnson Space Center Web site at http://images.jsc.nasa.gov/

6th annual Daughters Day to be held April 23 at space center

Imagine A Day is the theme for Take Our Daughters To Work Day this year. Kennedy Space Center will celebrate this special day for the sixth straight year on April 23.

The event, founded six years ago by the Ms. Foundation for Women, is a national effort to make young women aware of the many career choices available to them, and to enable parents, grandparents, and close acquaintances to share their work day with a girl.

Sponsors may bring more than one child, but only children nine years and older may participate. The target age for reaching young girls is when they are developing a sense of self, ages nine through twelve years.

KSC contractor employees should contact their Public Relations Office to determine the opportunities available to them.

NASA employees will participate in accordance with the following schedule:

7:30 – 8 a.m., April 23, KSC Visitor Complex, gather in IMAX II Theater.

8 – 9:30 a.m., special program for NASA daughters. Jane Provancha, an employee of Dynamac, and lead of the Aquatics Group in the Ecological Programs for KSC, will speak. Also to be featured will be a speaker from the local community.

All contractor and NASA sponsors and their daughters may attend the second program at the Visitor Complex. Beginning at 9:30 a.m., there will be a Robotics Demonstration by Steve Van Meter, NASA Hazardous Duty robotics specialist. These demonstrations will take place between the Galaxy Center and the pond by the Astronauts Memorial. The KSC Visitor Complex Spaceman also will be available at this location for a photo opportunity.

A special equipment display will be set up by the Base

Operations Contractor in the parking lot behind the Headquarters Building from 7:30 a.m. to 12 noon. Some of the equipment on display will be a fire truck, ambulance, helicopter, SCAPE van and a patrol unit. The special response team and a K-9 unit will conduct demonstrations.

All NASA and contractor employees and their daughters are invited to take a tour and visit the new tour destinations. Tickets must be purchased in person on April 20, 21, or 22, at Ticket Booth #10 in the Ticket Pavilion at the Visitor Complex between 11 a.m. and 4 p.m. Tickets for adults will be $14, and $5 for children.

Sponsors may take as many children as they wish on the tour, but no unaccompanied children will be allowed. Visitors may stay at the tour sites for as long as they wish. Return buses are available every 15 minutes all day.

Special Daughters Day badges will be distributed. Contractor employees should contact their representatives to obtain badges.

NASA employees may pick up their badges on April 20, 21, and 22, between 10 a.m. and 2 p.m. in Headquarters, Room 2331.

The following instructions apply to ALL attendees:

• All children must be at least nine years old in order to participate.

• Children must wear their badge and be with a badged employee at all times on KSC.

• The sponsor is responsible for the children they bring — the child may go with another person to another work site, but ultimate responsibility remains with the sponsor.

• Children may not enter any controlled access area which requires a controlled access badge. Personnel working in these areas, which include the Vehicle Assembly Building, Orbiter Processing Facilities, and Operations and Checkout Building, may arrange for another person to take their child to an approved area.

IMPORTANT: Due to the Delta launch scheduled the morning of April 23, Gate 1 on Cape Canaveral Air Station will not be open to employees bringing girls to work with them. Also, due to hazardous operation constraints, employees who work on Cape Canaveral property will not be permitted to take the girls to their work areas.

A Take Our Sons to Work Day is planned for June 11. More information will be forthcoming in a later issue.

Picnic tickets go on sale April 20

It's ticket time!

Tickets for the May 16 KSC All-American Picnic will be on sale in KSC's NASA Exchange Stores from Monday, April 20, through Friday, May 15.

The cost of the tickets if purchased before the picnic is $3 for adults (age 13 and up) and $2 for children (age 3 to 12). Children under 3 years old are not required to have a ticket for entering the picnic, but a ticket is required for a meal.

Tickets are $1 more when purchased at the gate on May 16.

A new event and a twist on a traditional highlight are planned:

Seafood Cookoff: This year, to add a distinctively Floridian flavor to the picnic, there will be a seafood cookoff instead of a chili cookoff. This includes chowder, gumbo, or any kind of seafood stew. Participants are encouraged to be creative! In the past, as is expected this year, both originality of recipe and presentation in the form of storefronts have made for a fabulous time for everyone.

To sign up, get a copy of the rules, or for more information, contact Cook-Off Chairman Rick English at tel. 867-4345, or e-mail Richard.English-1@ksc.nasa.gov

Kids coloring contest: This year a coloring contest for children is being held. Pictures to color in have been sent to all KSC employees. If you did not receive one, please copy one from a friend or request one from the Equal Opportunity Program Office at 867-2307.

The following rules will apply to the contest: Any child, 12 years old or younger, who is the child, grandchild, or close relative (i.e., niece or nephew) of any KSC employee and lives in the Central Florida area may enter.

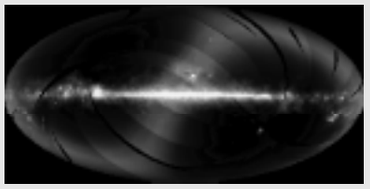
Pictures must be done in crayon, marker, or color pencil, and only one entry per child is permitted. Entries must be received at KSC-AAP Coloring Contest, Sher-13, by April 24.

Artwork will be on display at the picnic, and winners will be announced at 2 p.m. in the children's carnival area. Winners do not have to be present to win. If winners are not present, prizes will be forwarded to the sponsor listed on the entry form.

CENTER Director Roy Bridges snaps up the first KSC All-American Picnic ticket March 31 from (left to right) Pam Steel, ticket chairperson Barbara Naylor, and Maria Wilson. Steel and Wilson are picnic committee co-chairpersons.

Women's luncheon

MARILYN Waters (left), chief executive of Watermark Strategic Communications, chats with Biomedical Office head Dr. Irene Long at the Women's History Month luncheon March 19. Waters was the keynote speaker for the luncheon, attended by more than 100 people. Loren Shriver, deputy director for Launch and Payload Processing, also spoke to the group.



SIRTF will build on data gathered by two predecessors, the Infrared Astronomical Satellite (IRAS) and the Cosmic Background Explorer. The above image was assembled from data gathered by IRAS over a six-month period and shows nearly the entire sky. The bright horizontal band is the plane of the Milky Way. IRAS measurements increased by 50 percent the total number of astronomical sources previously identified.

Work begins on last great observatory

NASA Administrator Dan Goldin gave the go-ahead for the start of design and development of the fourth and final NASA great observatory, the Space Infrared Telescope Facility (SIRTF).

SIRTF is scheduled to be launched in December 2001 on a Delta 7920-H rocket from Cape Canaveral Air Station. The other three great observatories are the Hubble Space Telescope, launched in April 1990, the Compton Gamma Ray Observatory, launched the following year; and the Advanced X-ray Astrophysics Facility (AXAF), to be launched this year.

Lockheed Martin Missiles and Space is responsible for the spacecraft and system integration and testing. The project is being managed for NASA by the Jet Propulsion Laboratory.

Safety ...

(Continued from Page 1)

KSC NASA workforce can use on a daily basis.

"We're not trying to be DuPont," explained team lead Bill Higgins. "We're trying to create the new KSC safety culture."

"We are empowering the individual to do more in the area of safety by giving them the tools and know-how to do it," emphasized safety operations expert Rick Sweet.

The initial exposure last year to DuPont safety practices demonstrated the importance of individual responsibility. The trick, Sweet noted, "is that if you are going to work to that culture, how do you do it?"

Directorate members developed an innovative umbrella concept called the University of Safety and Mission Assurance. The core team acts as a clearinghouse and consulting group, soliciting requests from other organizations for safety support. A program is developed according to the needs of the requestor, be it an individual, a group or an organization, and the type of work setting (outdoors, a lab area, or an office).

"This is not a canned training program," Sweet emphasized. "It's educating and then assessing and evaluating how effective that education has been. That's why we call it a university."

One of the first NASA employees to receive the training was Lisa Fowler, logistics coordinator in the Public Affairs Office. It's Fowler's job to perform a walkdown of the Banana Creek launch viewing site prior to each mission. Although she already had an established and effective routine, the training session March 13 added a higher level of alertness to safety issues.

"If you're not well-trained and practiced in safety, it's easy to make a lot of assumptions," said Higgins. "If you're responsible for safety, there needs to be reassurance that the equipment is doing what it's supposed to. We teach you what to look for.

"We're getting people to look at an area beyond its intended need," he continued. "The intended need must include that it's safe."

At Banana Creek, Sweet showed Fowler two areas that could be made safer. Roped-off areas could be made more secure with the addition of signs. The safety walkdown also revealed two high-level bleachers that did not have protection to keep people from falling off the back. Fowler, who has worked at KSC since 1980 and covered logistics since 1992, found the training valuable. "I learned some stuff that I didn't know before, and other concepts were reinforced," she said.

"I like that the training was not generic, but tailored to our area," she added, noting that the faulty bleachers were already turned in for repair.

Fowler will continue to provide data to the safety group following every walkdown. "This is not about training someone and then walking away," Sweet said.

The next area to receive the training will be the Biomedical Office. Center Director Roy Bridges strongly supports the safety educational initiative and hopes every NASA directorate at KSC will take advantage of it.

"I think anyone who participates in this educational process will be impressed by what they learn," Bridges said. "Whether you work in an office, a laboratory, an operational area, or out in the field, safety awareness should be an inherent element of how you perform your daily responsibilities. The goal of the University of Safety and Mission Assurance is to empower us with the right tools to work safely. I urge all NASA KSC organizations to take part in the program."

"We are making people part of the safety and quality program," noted Safety and Mission Assurance Director Tom Breakfield. "The new KSC safety culture empowers the individual to do more in the area of safety, creating an interdependence among all of us for our personal safety, the safety of our fellow workers, and the creation of a safer workplace."

University of Safety and Mission Assurance

Core Group and Points of Contact

• To arrange a safety consultation, contact Bill Higgins, team leader, at tel. 867-7390, or e-mail William.Higgins-1@ksc.nasa.gov.

Members of the University of Safety and Mission Assurance core group include:

• Bill Higgins, team lead
• John Branard, system safety
• Dave Barker, institutional safety
• Les McDonigal, institutional safety
• Russ DeLoach, reliability and maintainability
• Robert Nagy, quality engineering
• Jim Medina, human factoring
• Lori Cernell, software assurance

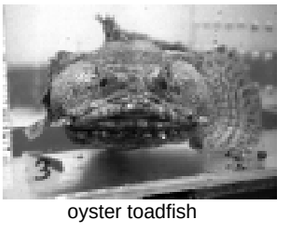
• Rick Sweet, instructor

STS-90 ...

(Continued from Page 1)

to Earth 60 percent needed to sit down before the 10 minutes were up. Some showed a significant decrease in blood pressure.

Another phenomenon that will be studied is sleep loss. Shuttle crews report an average sleep period of 5 to 6 hours, compared to the typical 7-8 hour period on Earth.



oyster toadfish

Also planned are a series of new investigations in the area of mammalian neural development that will address the following:

• Is gravity necessary for normal development?

• How do muscles and their neural connections develop without gravity?

• Will the vestibular system (the balance organs in the ear and all the connections they make to the eyes, brain and muscles) develop normally?

• Will animals walk properly if these skills develop in the absence of gravity?

The experiments are organized under eight teams, each focusing on a different aspect of the nervous system, its development, function and physiology. Four teams, with a combined total of 11 experiments, will use the crew as subjects. These are the Autonomic Nervous System; Sensory Motor and Performance; Vestibular; and Sleep teams. The other four teams, featuring 15 experiments, will study the animals on board. These are the Neuronal Plasticity (a phenomenon in which the nervous system reacts to changed conditions by making new connections or using existing connections in different ways — learning on a cellular level); Mammalian Development; Aquatic; and Neurobiology teams.

Unlike previous Spacelab missions, the seven STS-90 members will work the same schedule and not divide into teams. Researchers want to preserve the crew's normal circadian rhythms to gather the most accurate data possible.

The mission is set to conclude with a landing at KSC May 3 at 11:07 a.m. EDT.

NOV. 12, 1997 — Technicians in the Operations and Checkout Building install the Neurolab in the Spacelab module.

MARCH 19, 1998 — Neurolab team members sign a banner that will fly on the mission. From left are STS-90 payload Manager Scott Higginbotham; Mike Generale; Bridget Higginbotham, Launch Site Support Manager for the mission; Jennifer Wahlberg; and Luke Setzer.

MARCH 11, 1998 — Fish that will fly on STS-90 were housed in aquariums in the Operations and Checkout Building prior to the flight. Here, Ingo Ronny Wortmann (left) and Dr. Dirk Voeste, scientists with Ruhr-University of Bochum, Germany, examine the swordtail fish. Some will fly in the Closed Equilibrated Biological Aquatic System (CEBAS) minimodule, a middeck locker-sized freshwater habitat designed to allow the controlled incubation of aquatic species.

MARCH 31, 1998 — TCDT wraps up at Launch Pad 39B. From left are STS-90 crew members Payload Specialist Jay Buckey; Pilot Scott Altman; Mission Specialist Kay Hire; Commander Richard Searfoss; Payload Specialist James Pawelczyk; Mission Specialist Dafydd Williams of the Canadian Space Agency; and Payload Commander Richard Linnehan.

John F. Kennedy Space Center

Spaceport News

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